

## OPHTHALMOLOGY

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UNDER THE CHARGE OF

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**Treatment of Choked Disk by Excision of the Sheath of the Optic Nerve.**—KUBIK (*Klin. Monats. f. Augenhk.*, June, 1921, p. 898) sets up the following indications for the treatment of choked disk appearing with symptoms of brain tumor or increased intracranial pressure. (1) All localizable and accessible brain tumors are to be subject to radical operation. (2) In cases of non-localizable brain tumors, including pseudo-tumors, palliative interference upon the skull is to be practised (trephining). (3) Müller's operation of excision of the sheath of the optic nerve is to be practised as the least dangerous operative interference in all cases in which operation upon the brain is refused, and in cases of absence of any special etiology for the occurrence of the involvement of the papilla, when the neurological examination does not indicate a brain tumor; but even in these cases, where the seat of the effect can not be assumed to lie within the posterior portion of the skull, lumbar puncture is the operation of first choice. (4) Where the choked disk does not subside after a palliative operation, or the vision continues to deteriorate, early excision of the sheath should be superadded. In any event, the writer regards this operation as a valuable addition and deserving of extended application. Further experience should lead to greater precision in the indications.

**Genesis of Myopia.**—Probably no question in the entire range of ophthalmology has received greater attention than this of the origin of myopia. The subject is still a live one, as is evidenced by the discussion which is constantly reappearing in the literature. In this connection, HANSEN (*Klin. Monats. f. Augenhk.*, August, September, 1921, p. 171) publishes the results of autopsy of a case of high myopia which, in his opinion, clearly shows the relation between the position of the myopic globe to that of the optic nerve in the orbit. In this case, as is well shown in an accompanying photograph, the enlarged globe was seen to extend backward with the nerve markedly curved in the shape of an S. This case, in his opinion, clearly demonstrates that the nerve not only exercises no traction upon the posterior pole, but that, on the contrary, the bulb exercises a force of compression backward upon the nerve. It may be of interest to give a short *resume* of the hypotheses as to the origin of myopia which assume some sort of traction between the globe and the nerve. Hasner supposed the optic nerve to be absolutely or relatively too short, so that during convergence the nerve caused traction upon the sclera in the region

of the posterior pole. Weiss favored the same view: According to him the free portion of the nerve between the foramen opticum and posterior surface of the sclera is too short. In 1908, Levinsohn emphasized the significance of the position of the head during near work; he assumed that upon bending forward of the head, the eyeball advanced through gravity and venous congestion; the optic nerve, fixed as it is, by connective tissue, bloodvessels and nerves, exercises a not unimportant drag upon the posterior pole and thus occasions the well-known myopic deformation; this writer attempted to establish his hypothesis by experiments upon animals. Finally, Dinger made exhaustive studies upon the influence of the position of the head upon that of the eye, and also of the shape and interior configuration of the same. He agrees with Levinsohn that from the forward sinking of the globe, traction must occur by the relatively shortened nerve; such traction, though slight, he regards as adequate in the developing eye of youth to result in enlargement at the posterior pole and lengthening of the axis.

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**Artificial Eyes.**—COULOMB (*Archiv. d'ophthalmol.*, November, 1921, p. 677) urges the constant wearing of the newer forms of double-shelled prothesis, as against the former method of wearing the older models (simple shells). The latter offer, by means of their posterior concave wall, a lodgment for the tears, forming a veritable moist chamber which macerates the conjunctiva, such maceration causing irritation of the mucous membrane and the mucopurulent secretion, involving the unpleasant necessity of removing the shell during the night and frequently cleansing the orbit. With the double shells there is no space between the bottom of the ocular cavity and the posterior surface of the artificial eye; the tears circulate normally and carry away to the lacrimal drainage apparatus dust and other impurities; no cleansing lotions of any kind are required. To secure perfect tolerance, the shells must be perfect in finish and polish; imperfections hardly supported during waking under frequent winking, become insupportable at night when the lids are closed. The shell should be relatively small and a new one substituted when the first one loses its polish. These shells naturally do not last very long, being worn constantly—eight or ten months on an average. On the other hand, not having to be handled and frequently cleansed, there is little danger of accidental breakage.

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**Difference in Size of the Pupils; Homolateral Miosis from Parasympathetic Repercussion in Affections of the Head.**—LAFON (*Annal. d'oculist.*, October, 1921, p. 736) concludes that unilateral affections of the head, traumatic or otherwise, may occasion an inequality of the pupils, in the form either of homolateral mydriasis or miosis. In the former case, the lesion, in general superficial, provokes an irritation of the centripetal fibers of the thorax lumbar sympathetic system which spreads to the bulbar pupillo-motor nucleus of the same system, resulting in dilatation of the pupil of the same side. In the second case (miosis), the lesion, in general profound, provokes an irritation of the centripetal fibers of the cranial para-sympathetic, or autonomous system, which likewise spreads to the meso-cephalic

pupillo-motor nucleus depending upon the same system, giving rise to a narrowing of the pupil of the same side. Such mydriasis and miosis, from repercussion, are accordingly of the spasmodic type. Beside their homolaterality, they possess characteristics in common of not directly altering the sensory-motor reactions, and of not being accompanied by other elements of the syndromes of excitation or paralysis of the cervical sympathetic or third nerve; such anisocoria becomes more marked in darkness, while it diminishes and tends to disappear in bright light.

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**Ocular Disturbances Complicating Otitis Media.**—GURDIL (*Paris Thesis*, 1921) finds that the ocular complications occurring in the course of otitis media are paralysis of the sixth nerve (9 per cent) and papillary stasis, with or without neuritis, 60 per cent. The paralysis is encountered particularly in those cases of otitis with intracranial complications: The immediate causes are diverse: Foci of circumscribed meningitis, cerebellar abscess, thrombo-phlebitis. Cases have also been observed without intracranial complications; the pathogeny of these is difficult of explanation: In these, too, quite probably there is some affection bearing directly upon the nerve. The alterations of the optic nerve observed in the course of otitis, present themselves under two forms: Simple papillary stasis, unaccompanied by immediate signs of disturbance of function in cases where ventricular hypertension is alone present; stasis with neuritis and rapid failure of vision, when to the ventricular hypertension is added a meningear infection along the sheath of the optic nerve. Systematic examination of the fundus in the course of otitis media accompanied by general symptoms will alone render possible the detection of such alterations of the optic nerve. Treatment depends upon early diagnosis; good results are obtained in papillary stasis particularly. Lumbar puncture will be of service in cases of slight hypertension; it must be repeated several times. In cases of hypertension with papillary stasis, recourse must be had to decompressive craniectomy; to be effective intervention must be made before the process has proceeded to atrophy. In stasis with neuritis, vaccino-therapy is of prime importance where it has been possible to isolate the infectious germ.

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**Inequality of the Pupils as an Early Sign of Pulmonary Tuberculosis.**—The idea of the frequency of inequality of the pupils in pleuro-pulmonary affections is not a new one; it has been referred to during the past years by numerous writers. SERGENT (*Bull. de l'Acad. de méd.*, April 12, 1921) has made a study of the subject, especially in pleuritis of the apex; he has shown the importance and frequency of unilateral mydriasis from irritation of the sympathetic as a diagnostic mark of early lesions—at times preceding all other signs. The same writer has studied a latent inequality rendered manifest by instillation of a weak solution of atropin, 1 : 1000. Before making the test, it is necessary to make sure that the eye itself is free from disease. After instillation, the beginning of the reaction must be observed attentively; it commences in general after ten or twelve minutes, and increases progressively to become complete at the expiration of twenty to twenty-five minutes; one pupil begins to dilate before the

other, increases more rapidly to its maximum, and first loses the light reflex, following which equilibrium between the two pupils is reestablished, both being completely and equally dilated during two or three days. In the reverse order, the healthy pupil returns to its normal condition first, while the other remains larger for a longer time. A detail of great importance is the instillation of the identical quantity of the solution in each eye. The writer sums up the results obtained by the following statistics: 10 cases without pulmonary lesion, test entirely negative; of 18 cases with confirmed unilateral pulmonary lesion, in 11 the pupil test was positive; in 3 cases of absence of pupillary inequality under atropine there was evidence of cicatricial lesions in the chest; in 23 cases with uncertain physical signs, in 15 the test was positive upon the side which had aroused suspicion upon auscultation; in 7 cases with inequality before instillation, the condition became more marked after atropine; in 1 case the inequality was reversed after instillation, but in this case there were bilateral lesions. The above results seem to establish the value of the test; in fact, they are confirmatory of results already obtained by Cantonnet in the same way. It thus appears that the test may render considerable service clinically in affording an additional diagnostic element in doubtful cases.

**Tuberculous Dacryoadenitis.**—BEAUVIEUX and PESME (*Archiv. d' ophtal.*, January, 1922, p. 22) conclude that tuberculosis of the lacrimal gland is an extremely rare affection. It occurs under two forms: Exceptionally as a caseous process, and more commonly as a sclerosis. It is found in patients with manifest tuberculosis, and again in youths or adults apparently free from all bacillary taint. The disease of the gland is of hematogenous origin, being secondary to some apparent lesion or else to an unrecognized deep focus of infection. The process is an attenuated one, little virulent; it is characterized pathologically by perivascular and periacinous infiltration of inflammatory cells accompanied by typical or atypical giant cells; scleratizing fibrous tissue predominates, forming a barrier to the infection and limiting the same to small circumscribed islets, in the midst of which normal or degenerated acini are visible; Koch's bacillus is almost uniformly absent. Attenuated tuberculosis of the lacrimal gland presents itself in the form of an indurated tumor with slightly irregular surface, mobile, painless, increasing slowly, and capable of spontaneous recession; it may be uni- or bilateral. The prognosis, so far as the local disease is concerned, is favorable; the general prognosis depends upon the degree of systemic tuberculous involvement. The affection may be confounded with benign tumors of the lacrimal gland (adenoma, adenofibroma) and especially with simple sclerotic hypertrophy (chronic dacryoadenitis) which it resembles even to the histological appearances. The diagnosis may be confirmed by inoculation into guinea-pigs. Treatment can be expectant, spontaneous regression being possible: The rational method, however, is extirpation.